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EXAMINER

ZHAO, DAQUAN

ART UNIT

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2621

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/566,341	<b>Applicant(s)</b> ITOH ET AL.	
	<b>Examiner</b> DAQUAN ZHAO	<b>Art Unit</b> 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/5/2010</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/19/2010 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura et al (US 2004/0,019,681 A1) and further in view of Sawabe et al (US 5,966,352).

For claim 1, Nakamura et al teach a data processor for reading content data from a continuous area on a storage medium and playing back video and/or audio based on the content data, the continuous area including a data area, in which the content data is

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stored, and a non-content-data area, in which the content data is not stored (e.g. figures 4-5, paragraph 115, the examiner considers the DVD recorder as the claimed data processor, The examiner also consider the data area from a1 to a3 of figure 5 (a) as the claimed continuous area, wherein area from a1 to a2 corresponds to the data area and area from a2 to a3 corresponds to the non-content-data area), the data processor comprising:

- a reading control section for giving an instruction to read the content data of a predefined size from the data area and an instruction to start to play back the video and/or the audio based on the content data that has been read out (e.g. paragraph 119, area from a1 to a2 corresponds to the predefined size, the reading of the data has to be according to an instruction, and the instruction can be initiated from the user by using the remote controller as shown in figure 3);

- a head for reading the content data from the data area in accordance with the instruction to read (e.g. paragraphs 115-116, optical pickup 101); and

- a buffer memory for accumulating the content data that has been read (e.g. paragraph 115-116, track buffer 103),

wherein the reading control section determines the predefined size by the amount of time it takes to skip the non-content-data area, reads the content data of the predefined size, accumulates the data in the buffer memory, and then gives an instruction to start to play back the content (e.g. paragraph 119 data is accumulated in the track buffer during the reading period from t1 to t2 or a size of the area from a1 to a2, in paragraphs 118- 119, "...the data can be supplied continuously to the decoder

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106 by consuming the amount of data  $B(t_2)$  accumulated in the track buffer 103 during the time period from the time  $t_2$  up to the time  $t_3$  (or the position  $a_3$ ) when reading of the data starts. In other words, if a certain amount of data or more is read out securely before seek, AV data can be supplied continuously Even if the seek occurs..." Figure 5(a) shows how data is recorded into or seek from the optical disk. When area A1, which data is recorded, is seek, the amount of data accumulated in the track buffer  $B(t_2)$  during the time period from  $t_1$  to  $t_2$ . When the optical head skip from area from  $a_2$  to  $a_3$  because there's no data recorded, the amount of data  $B(t_2)$  is readout from the track buffer to the decoder during the corresponding time period from  $t_2$  to  $t_3$  when skipping of the seek action happens. After time  $t_3$  data from area A2 must be accumulated in the track buffer again to enable continuous reproduction of AV data.).

Nakamura et al fail to teach accumulates the data of predefined size in the buffer memory initially. Sawabe et al teach accumulates the data of predefined size in the buffer memory initially (e.g. column 21, lines 22-34 and figure 13B, from time  $t_0$  to  $t_1$  the buffer is full before the jump time  $T_{ju}$ , Sawabe et al teach accumulates data in the buffer until the buffer is full to provide enough data for the buffer during the jump time to avoid data underflow. Therefore, the buffer capacity (full buffer) corresponds to the claimed "data of predefined size", also see column 17, lines 46-61 of Sawabe et al for "the underflow of the buffer"). It would have been obvious to one ordinary skill in the art at the time the invention was made to have motivated to incorporate the teaching of Sawabe et al to pre-fill the buffer to prevent data from underflow during jump time to increase the robustness of the system.

Claim 8 is rejected for the same reasons as discussed in claim 1 above.

Claims 7 and 14 are rejected for the same reasons as discussed in claim 1 above, wherein time T0 to T1 in figure 13B of Sawabe et al corresponds to the claimed predetermined period of time.

For claims 2 and 9, Nakamura et al teach reading control section determines the predefined size by a data read rate at which the content data is read (e.g. paragraph 116 and 119 reading rate  $V_a$  is fixed).

For claims 3 and 10, Nakamura et al teach the content data is encoded data representing the video and/or the audio, and wherein the data processor further includes a decoding section for reading the content data of the predefined size from the buffer memory and decoding the content data in accordance with the instructions given by the reading control section (e.g. paragraph 115 and figure 4, decoder 106).

For claims 4, Nakamura et al teaches the minimum area length of the continuous area is determined by a data read rate, which has been defined based on a required data rate to play back the content and on a unit time to perform the playback, and by the size of extra data to be accumulated in the buffer memory, and wherein the size of the extra data is determined by a data size, which has been defined on the longest seek time it takes to reach the next continuous area and a data rate required for playback during the longest seek time, and by the predefined size (e.g. paragraph 119, the data read rate  $V_a$  determines  $B(t_2)$  which is the amount of data accumulated in the track buffer, wherein the data read out from area from  $a_1$ - $a_2$  corresponds to  $B(t_2)$ , the extra data from area  $a_3$  to  $a_4$  can be accumulated in the buffer memory after time  $t_3$ , since

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Nakamura et al teach "AV data can be continuously reproduced by supplying data stored in the track buffer to the decoder 106 during the period of seeking from a2 to a3, it must defined a minimum area length according to the read rate  $V_a$ , otherwise, the AV data can not be continuously reproduced).

For claim 11 Nakamura et al teaches the minimum area length of the continuous area is determined by a read data size, which has been defined based on a required data rate to play back the content and on a unit time to perform the playback, and by the size of extra data to be accumulated in the buffer memory, and wherein the size of the extra data is determined by a data size, which has been defined on the longest seek time it takes to reach the next continuous area and a data rate 20 required for playback during the longest seek time, and by the predefined size (e.g. paragraph 119, the data read rate  $V_a$  determines  $B(t_2)$  which is the amount of data accumulated in the track buffer, wherein the data read out from area from a1-a2 corresponds to  $B(t_2)$ , the extra data from area a3 to a4 can be accumulated in the buffer memory after time  $t_3$ , since Nakamura et al teach "AV data can be continuously reproduced by supplying data stored in the track buffer to the decoder 106 during the period of seeking from a2 to a3, it must defined a minimum area length according to the read rate  $V_a$ , otherwise, the AV data can not be continuously reproduced).

For claims 5 and 13, Nakamura et al teach the non-content-data area includes at least one of a defective area, of which the area length corresponds to at most a permissible defect rate for the continuous area, and a data area including data other than the content data (e.g. paragraph 120).

For claims 6 and 12, Nakamura et al teaches the continuous area has an area length that is at least equal to the minimum area length (e.g. figure 5, the examiner considers area from a1 to a2 is at least equal to the minimum area length because Nakamura et al teach "AV data can be continuously reproduced by supplying data stored in the track buffer to the decoder 106 during the period of seeking from a2 to a3, it must defined a minimum area length according to the read rate  $V_a$ , otherwise, the AV data can not be continuously reproduced).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daquan Zhao whose telephone number is (571) 270-1119. The examiner can normally be reached on M-Fri. 7:30 -5, alt Fri. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tran Thai Q, can be reached on (571)272-7382. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Daquan Zhao/  
Examiner, Art Unit 2621

/JAMIE JO ATALA/

Primary Examiner, Art Unit 2621